

WHAT IS CLAIMED IS:

1                   1.       A monitoring system for a vehicle, comprising:  
2                   a diagnostic system configured to receive sensor information from at least one  
3 sensor mounted on the vehicle;  
4                   a vehicle operator interface configured to receive input from a vehicle operator  
5 and to display a plurality of prompts to the vehicle operator according to a predetermined  
6 algorithm,  
7                   a wireless communication device on board the vehicle, the wireless  
8 communication device coupled to the diagnostic system to communicate sensor information from  
9 the diagnostic system and coupled to the vehicle operator interface to communicate input from  
10 the vehicle operator interface;  
11                   a remote central data center in wireless communication with the wireless  
12 communication device and receiving sensor information and input from the vehicle operator  
13 interface; and  
14                   a communications network coupled to the remote central data center.

1                   2.       The monitoring systems of claim 1, further comprising:  
2 a technical support group interface coupled to the communications network.

1                   3.       The monitoring system of claim 1, further comprising:  
2 a fleet management information center interface coupled to the communications  
3 network.

1                   4.       The monitoring system of claim 1, further comprising:  
2 an equipment maintenance center interface coupled to the communications  
3 network.

1                   5.       The monitoring system of claim 1, further comprising:  
2 a dealer service center interface coupled to the communications network.

1           6.     An off-highway work vehicle comprising:  
2                 a diagnostic system configured to receive sensor information from at least one  
3 vehicle sensor mounted on the off-highway work vehicle;  
4                 an operator interface configured to receive input from a vehicle operator and to  
5 display a plurality of prompts to the vehicle operator according to a predetermined algorithm; and  
6                 an onboard fleet management system coupled to the diagnostic system to receive  
7 sensor information from the diagnostic system and coupled to the operator interface to receive  
8 input from the operator interface; and  
9                 a wireless communication device coupled to the onboard fleet management  
10 system to communicate sensor information and operator input from the operator interface to a  
11 data receiver.

1           7.     The off-highway work vehicle of claim 6 wherein the onboard fleet  
2 management system further comprises:  
3                 a microprocessor configured to receive sensor information from the diagnostic  
4 system and operator input from the operator interface.

1           8.     The off-highway work vehicle of claim 6 wherein the wireless  
2 communication device comprises a modem and transmitter coupled to the onboard fleet  
3 management system.

1           9.     The off-highway work vehicle of claim 8 wherein the transmitter is  
2 configured to transmit a cellular telephone signal.

1           10.    The off-highway work vehicle of claim 8 wherein the transmitter is  
2 configured to transmit a satellite communications signal.

1                    11.     The off-highway work vehicle of claim 6 wherein the operator prompts are  
2 a succession of questions for the operator and wherein the operator interface is configured to  
3 accept responses to the operator prompts.

1                    12.     The off-highway work vehicle of claim 11 wherein the predetermined  
2 algorithm is a decision tree and wherein the responses are stored as a data character string.

1                    13.     The off-highway work vehicle of claim 6 wherein the data receiver is a  
2 remote central data center.

1                    14.     A method for monitoring a work vehicle comprising:  
2 retrieving inputs from an operator on the vehicle;  
3 retrieving sensor information from at least one sensor connected to the vehicle;  
4 running a diagnostics algorithm configured to provide diagnostics information  
5 based on at least some of the inputs from the operator and the sensor information; and  
6 communicating the diagnostics information to a data receiver via a wireless  
7 communication data link.

1                    15.     The method of claim 14 wherein the data receiver is a remote data center.

1                    16.     The method of claim 15 wherein the retrieving inputs from an operator  
2 uses a decision tree algorithm to determine decision tree data.

1                    17.     The method of claim 16 wherein the diagnostics information is the  
2 decision tree data.

1                    18.     A fleet management system for a work vehicle comprising:  
2 a microprocessor on the work vehicle;  
3 an operator interface on-board the work vehicle coupled to the microprocessor and  
4 configured to receive inputs from a vehicle operator;

5 a diagnostics algorithm configured to provide diagnostics information based on  
6 the inputs received from the operator; and  
7 a wireless data link configured to communicate the diagnostics information to a  
8 remote data receiver.

1 19. The fleet management system of claim 18 further comprising:  
2 at least one vehicle sensor coupled to the vehicle and configured to supply sensor  
3 information to the diagnostics algorithm.

1 20. The fleet management system of claim 18 wherein the wireless  
2 communication device further comprises:  
3 a modem coupled to the microprocessor and a transmitter coupled to the modem.

1 21. The fleet management system of claim 18 wherein the operator interface is  
2 configured to display a series of operator questions.

1 22. The fleet management system of claim 21 wherein the operator interface is  
2 configured to accept responses to the operator questions.

1 23. The fleet management system of claim 22 wherein the plurality of operator  
2 questions are derived from a decision tree.

1 24. The fleet management system of claim 23 wherein the responses are stored  
2 as a data character string.